SANDIA NATIONAL LABORATORIES
Albuquerque, New Mexico 87185

TITLE: UNDERGROUND DRILLING AND CORE REQUEST AND HOLE IDENTIFICATION SYSTEM

Prepared by: Angus Robb Date: 1/21/93

SNL Reviewer: Wayne A. Stensrud Date: 1/21/93

SNL Approval: [signature] Date: 1/21/93

SNL Safety Approval: Carla McKinney Date: 1/21/93

MOC Cognizant Department Manager Concurrence: [signature] Date: 1-22-93

MOC Manager of Industrial Safety: [signature] Date: 1-22-93

SNL QA Approval: Jessica L. Boyd Date: 2-5-93

PURPOSE: To detail the Sandia procedure for requesting and identifying holes and core in the WIPP underground experimental areas.

RESPONSIBILITY: All personnel involved in the drilling process, including the requester, the Drilling Coordinator, the Experimental Operations Supervisor, and the drill crew shall be cognizant of this procedure and should ensure that all holes drilled comply with these requirements.

SAFETY: The requester will note any unusual safety hazards or concerns on the Drilling/Core Request form 118.

REFERENCES: latest revision

I. Initial Drilling and Logging of Core Samples - Procedure 092

II. Sample Tracking System - Procedure 263

III. Job Hazard Analysis - Grouted Borehole Flange Collar and Rock Bolt Testing

FORMS: latest revision

I. No. 118 - Drilling/Core request

II. No. 257 - Facility Permeability Drilling/Core request (required only for Facility Permeability and Gas Threshold Testing)

QA RECORDS:

I. No. 118 - Drilling/Core request

II. No. 257 - Facility Permeability Drilling/Core request (required only for Facility Permeability and Gas Threshold Testing)

PROCEDURE:

I. The person requesting drilling or coring will complete a Drilling/Core Request, form 118 or 257, and obtain approval of the SNL Site Supervisor.

II. The approved Drilling/Core Request is submitted to the Drilling Coordinator for action. Each hole or core will be designated by a five digit identifier as follows:

A. Room, Location or Experiment Designator (see list below)

B. Subroom or subtest

C. Sequential unit number.

D. Subunit

III. To try to prevent new drilling activity from having an adverse effect on an existing experiment, the approval of at least one other P.I. is required, if there is more than one experiment planned in the area or room. This P.I. should have experiments in the requested area of drilling. In the event of a conflict, the SNL Site Supervisor will be responsible for its resolution.

IV. Designator examples: The borehole number will have one of the following prefixes to identify the area where the hole will be drilled.

An	Test Rooms (number)	N	
B	Test Room	O	
Cn	Test Rooms (number)	Pn	SPDV Rooms (number)
D	Test Room	Q	Test Room
E	Gas Testing	R	
F		S	South Drift
G	Test Room	T	Simulated RH & CH TRU Test
H	Test Room	U	
In	Alcoves (number)	V	
J	Test Room	Wn	Test Rooms (number)
K		Xn	Test Rooms (number)
Ln	Test Rooms (number)	Y	
M	Plugging and Sealing	Z	

V. Examples of hole designations: See above.
B_001
A1225-1
MCE35

VI. The Drilling Coordinator will review the form for completeness. To ensure that there is no duplication, the Albuquerque Tech Reps file coordinator will assign the hole number. This ensures that the number is compatible with the computer. The original completed form will be sent to QA for entry into the notebook system.

VII. The Drilling Coordinator then requests the holes to be drilled by Experimental Operations. Procedure 125 should be followed when requesting drilling. The Experimental Operations Drilling Supervisor ensures that a survey of the hole locations is completed and a copy of the survey report is sent to Sandia QA and the Drilling Coordinator.

VIII. At the time the hole is surveyed or when drilling begins whichever is first, a hole identification tag will be secured in place near the hole collar location. If the tag has to be removed for drilling purposes it should be replaced immediately following drilling. The tag will generally be a plastic or metal plate with the hole designation inscribed on it.

IX. Each section of core will be logged and identified in accordance with WIPP Procedure 092, Initial Drilling and Logging of Core Samples.

X. If original core must be recored or sawed, the requester will note that on form 118, Drilling Core/Request. When requesting recoring, include as much pertinent information as possible - core identification number, recore hole diameter, length, hole direction with respect to original core axis and technique desired (recoring vs. sawing). All recored pieces are to be marked appropriately and stored or shipped as requested by the drilling coordinator.

XI. A copy of the core request should accompany all shipped core. Procedure 263 should be followed when shipping core.

XII. The coring/drilling system uses its own set of procedures which satisfy the SNL requirements for sample control.

REVISION SUMMARY

To be completed by procedure's author before final revision is circulated for signatures.

I. Revisions made: UNDER FORMS ADDED # II. UNDER QA RECORDS ADDED # II. UNDER PROCEDURE ADDED CHANGES TO I.

II. Personnel effected:
(Check appropriate ones)

MOC Craftsman	
Drilling	✓
Shop	
Mechanical	
Electrical	
Gage	
Cable/TC	
U/G DAS	
Geotech	

SNL JOB AREAS	
DAS General	
DAS B49 Trailer	
DAS Sheds	
DAS Equip. Cal. & Inv.	
Thermocouple	
Cables	
Drilling	✓
Gage Installation	
Gage Cal. & Removal	
Plugging & Sealing	
Brine Transport	
QA	
General	
Principal Investigator	
Bin Leak Tester	
Permeability Testing	✓

III. Retraining required: (Circle One)

(Read/Re-read procedure)

Practical demonstration

Other _____

Signature of Procedure's Author Angus Robb Date 2/2/93